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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,614	01/16/2001	Freddie Lin	2008.004	4897

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EXAMINER	
DUONG, THOMAS	
ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	09/760,614	LIN ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on September 21, 2004. The amendment filed on September 21, 2004 has been entered and made of record. *Claims 1-28* are presented for further consideration and examination.

Response to Argument

2. The Applicants' arguments and amendments filed on September 21, 2004 have been fully considered, but they are not persuasive.

3. With regard to *claims 1 and 15*, the Applicants point out that:

   - *Although the methodologies of Huang et al and Applicants' invention are similar, Huang et al focused on the disclosure for IP packets (a Layer 3 network protocol) while the present invention can address a number of protocols in different network layers (e.g., Ethernet and ATM in Layer 2, IP in Layer 3, TCP/UDP in Layer 4, HTTP in Layer 7, etc.). Note that the ISO (International Organization for Standardization) define a 7-layer network structure for data communications. The present invention can be used for any one or combination of the 7 layers, as long as data comes with a packet format.*

   However, the Examiner finds that the Applicants' arguments are not persuasive and maintains that the Huang reference does disclose,

   - *receiving packets of data;* (Huang, col.3, lines 60-63)

Huang teaches that multiple packets are received and queued internally in a node before being grouped and transmitted.

- *combining the packets of data based on packet header destination information to form a first combined file;* (Huang, col.3, lines 47-59; col.4, lines 18-26; col.8, lines 26-27; module 556, fig.5B)

  Huang teaches that packets are grouped according to a common destination and dynamically combined the packets into one encapsulated packet.

- *compressing the first combined file to form a first compressed file; and* (Huang, col.4, lines 28-31; col.8, lines 31-33; module 558, fig.5B)

  Huang teaches that the combined encapsulated packet can be compressed to increase the communication performance.

- *transmitting the first compressed file based upon any one of a plurality of different protocols in different network layers.* (Huang, col.3, lines 47-59; col.4, lines 33-34; col.8, lines 39-42; module 562, fig.5B)

  Huang teaches of a *"system and method for group packet encapsulation and (optionally) compression ... [that would] increase packet transmission performance between two gateways or host computers by reducing data-link layer framing overhead, reducing packet routing overhead in gateways, reducing packet header overhead"* (Huang, col.3, lines 47-52). The Huang invention clearly applies to a group of data packets, which, as well known in the networking art, can pertain to any one of the 7 OSI networking layers.

Huang teaches of a *"system and method for group packet encapsulation and (optionally) compression ... [that would] increase packet transmission performance between two gateways or host computers by reducing data-link layer framing*

overhead, reducing packet routing overhead in gateways, reducing packet header overhead" (Huang, col.3, lines 47-52). The Huang invention clearly applies to a group of data packets, which, as well known in the networking art, can pertain to any one of the 7 OSI networking layers. Furthermore, Huang specifically states that the *"invention, which, as an example, can be used with IP packets"* (Huang, col.3, lines 56-57). In other words, Huang focused on the IP layer in the disclosure as an example and not as a limiting factor of the invention. In addition, the Examiner cannot find anywhere in the current application's disclosure the reference to the ability of applying the claimed invention to *"any one or combination of the 7 layers"* as the Applicants have remarked. Therefore, the Applicants still failed to clearly disclose the novelty of the invention and identify specific limitation, which would define patentable distinction over prior art.

4. With regard to *claims 11 and 26*, the Applicants point out that:

- *Although the methodologies of Huang et al and Applicants' invention are similar, Huang et al focused on the disclosure for IP packets (a Layer 3 network protocol) while the present invention can address a number of protocols in different network layers (e.g., Ethernet and ATM in Layer 2, IP in Layer 3, TCP/UDP in Layer 4, HTTP in Layer 7, etc.). Note that the ISO (International Organization for Standardization) define a 7-layer network structure for data communications. The present invention can be used for any one or combination of the 7 layers, as long as data comes with a packet format.*

However, the Examiner finds that the Applicants' arguments are not persuasive and maintains that the Huang reference does disclose,

- *receiving packets of data;* (Huang, col.3, lines 60-63)

  Huang teaches that multiple packets are received and queued internally in a node before being grouped and transmitted.

- *combining and compressing the packets of data destined for a first subnetwork according to a first compression algorithm to create a first compressed file; and* (Huang, col.3, lines 47-59; col.4, lines 18-26, lines 28-31; col.8, lines 26-27, lines 31-33; module 556 and 558, fig.5B)

  Huang teaches that packets are grouped according to a common destination and dynamically combined the packets into one encapsulated packet. Huang teaches that the combined encapsulated packet can be compressed to increase the communication performance.

- *combining and compressing the packets of data destined for a second subnetwork according to a second compression algorithm to create a second compressed file, each said compressing step being based upon any one of a plurality of different protocols in different network layers.* (Huang, col.3, lines 47-59; col.4, lines 18-26, lines 28-31; col.8, lines 26-27, lines 31-33; module 556 and 558, fig.5B)

  Huang teaches of a *"system and method for group packet encapsulation and (optionally) compression ... [that would] increase packet transmission performance between two gateways or host computers by reducing data-link layer framing overhead, reducing packet routing overhead in gateways, reducing packet header overhead"* (Huang, col.3, lines 47-52). The Huang invention clearly applies to a group of data packets, which, as well known in the networking art, can pertain to any one of the 7 OSI networking layers.

Huang teaches of a *"system and method for group packet encapsulation and (optionally) compression ... [that would] increase packet transmission performance between two gateways or host computers by reducing data-link layer framing overhead, reducing packet routing overhead in gateways, reducing packet header overhead"* (Huang, col.3, lines 47-52). The Huang invention clearly applies to a group of data packets, which, as well known in the networking art, can pertain to any one of the 7 OSI networking layers. Furthermore, Huang specifically states that the *"invention, which, as an example, can be used with IP packets"* (Huang, col.3, lines 56-57). In other words, Huang focused on the IP layer in the disclosure as an example and not as a limiting factor of the invention. In addition, the Examiner cannot find anywhere in the current application's disclosure the reference to the ability of applying the claimed invention to *"any one or combination of the 7 layers"* as the Applicants have remarked. Therefore, the Applicants still failed to clearly disclose the novelty of the invention and identify specific limitation, which would define patentable distinction over prior art.

5. With regard to *claims 2-10, 12-14, 16-25 and 27-28*, they are rejected at least by virtue of their dependency on the independent claims and by other reasons set forth in the previous office action. Accordingly, rejections for *claims 2-10, 12-14, 16-25 and 27-28* are presented as below:

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. *Claims 1-28* are rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (US006618397B1).

8. With regard to *claims 1-2 and 15-16*, Huang discloses,

- *receiving packets of data;* (Huang, col.3, lines 60-63)

  Huang teaches that multiple packets are received and queued internally in a node before being grouped and transmitted.

- *combining the packets of data based on packet header destination information to form a first combined file;* (Huang, col.3, lines 47-59; col.4, lines 18-26; col.8, lines 26-27; module 556, fig.5B)

  Huang teaches that packets are grouped according to a common destination and dynamically combined the packets into one encapsulated packet.

- *compressing the first combined file to form a first compressed file; and* (Huang, col.4, lines 28-31; col.8, lines 31-33; module 558, fig.5B)

  Huang teaches that the combined encapsulated packet can be compressed to increase the communication performance.

- *transmitting the first compressed file based upon any one of a plurality of different protocols in different network layers.* (Huang, col.3, lines 47-59; col.4, lines 33-34; col.8, lines 39-42; module 562, fig.5B)

  Huang teaches of a *"system and method for group packet encapsulation and (optionally) compression ... [that would] increase packet transmission performance between two gateways or host computers by reducing data-link layer framing overhead, reducing packet routing overhead in gateways, reducing*

packet header overhead" (Huang, col.3, lines 47-52). The Huang invention clearly applies to a group of data packets, which, as well known in the networking art, can pertain to any one of the 7 OSI networking layers.

Huang teaches of a *"system and method for group packet encapsulation and (optionally) compression ... [that would] increase packet transmission performance between two gateways or host computers by reducing data-link layer framing overhead, reducing packet routing overhead in gateways, reducing packet header overhead"* (Huang, col.3, lines 47-52). The Huang invention clearly applies to a group of data packets, which, as well known in the networking art, can pertain to any one of the 7 OSI networking layers. Furthermore, Huang specifically states that the *"invention, which, as an example, can be used with IP packets"* (Huang, col.3, lines 56-57). In other words, Huang focused on the IP layer in the disclosure as an example and not as a limiting factor of the invention. In addition, the Examiner cannot find anywhere in the current application's disclosure the reference to the ability of applying the claimed invention to *"any one or combination of the 7 layers"* as the Applicants have remarked.

9. With regard to *claims 3-4 and 17-18*, Huang discloses,

- *wherein the packets combined to form the first combined file have headers addressed to the same first subnetwork, the first subnetwork comprising a plurality of users.* (Huang, col.4, lines 26-33; col.5, line 61 – col.6, line 14; col.8, lines 33-36; module 560, fig.5B)

- *further comprising inserting headers addressed to the first subnetwork on the packets of the repacketized first compressed file.* (Huang, col.4, lines 26-33; col.5, line 61 – col.6, line 14; col.8, lines 33-36; module 560, fig.5B)

10. With regard to *claims 5-8 and 19-22*, Huang discloses,

- *selecting a second group of packets of data with headers addressed to a second subnetwork; combining the packets of data based on packet header destination information to form a first combined file;* (Huang, col.3, lines 47-59; col.4, lines 18-26; col.8, lines 26-27; module 556, fig.5B)

  Huang teaches that packets are grouped according to a common destination and dynamically combined the packets into one encapsulated packet.
- *compressing the second combined file to form a second compressed file; and* (Huang, col.4, lines 28-31; col.8, lines 31-33; module 558, fig.5B)

  Huang teaches that the combined encapsulated packet can be compressed to increase the communication performance.
- *transmitting the second compressed file.* (Huang, col.4, lines 33-34; col.8, lines 39-42; module 562, fig.5B)

  It is obvious to one of ordinary skill in the art that the method as rejected above according to Huang can be reapplied to a different common destination address to form a second group of encapsulated packets and compressed headers.

11. With regard to *claims 9-10 and 23-24*, Huang discloses,

- *wherein the receiving step receives the packets of data from a third subnetwork.* (Huang, col.3, lines 60-63)

Huang teaches that multiple packets are received and queued internally in a node before being grouped and transmitted.

12. With regard to *claims 11-14 and 25-28*, Huang discloses,

- *receiving packets of data;* (Huang, col.3, lines 60-63)

  Huang teaches that multiple packets are received and queued internally in a node before being grouped and transmitted.

- *combining and compressing the packets of data destined for a first subnetwork according to a first compression algorithm to create a first compressed file; and* (Huang, col.3, lines 47-59; col.4, lines 18-26, lines 28-31; col.8, lines 26-27, lines 31-33; module 556 and 558, fig.5B)

  Huang teaches that packets are grouped according to a common destination and dynamically combined the packets into one encapsulated packet. Huang teaches that the combined encapsulated packet can be compressed to increase the communication performance.

- *combining and compressing the packets of data destined for a second subnetwork according to a second compression algorithm to create a second compressed file, each said compressing step being based upon any one of a plurality of different protocols in different network layers.* (Huang, col.3, lines 47-59; col.4, lines 18-26, lines 28-31; col.8, lines 26-27, lines 31-33; module 556 and 558, fig.5B)

  Huang teaches of a *"system and method for group packet encapsulation and (optionally) compression ... [that would] increase packet transmission performance between two gateways or host computers by reducing data-link*

layer framing overhead, reducing packet routing overhead in gateways, reducing packet header overhead" (Huang, col.3, lines 47-52). The Huang invention clearly applies to a group of data packets, which, as well known in the networking art, can pertain to any one of the 7 OSI networking layers.

Huang teaches of a *"system and method for group packet encapsulation and (optionally) compression ... [that would] increase packet transmission performance between two gateways or host computers by reducing data-link layer framing overhead, reducing packet routing overhead in gateways, reducing packet header overhead"* (Huang, col.3, lines 47-52). The Huang invention clearly applies to a group of data packets, which, as well known in the networking art, can pertain to any one of the 7 OSI networking layers. Furthermore, Huang specifically states that the *"invention, which, as an example, can be used with IP packets"* (Huang, col.3, lines 56-57). In other words, Huang focused on the IP layer in the disclosure as an example and not as a limiting factor of the invention. In addition, the Examiner cannot find anywhere in the current application's disclosure the reference to the ability of applying the claimed invention to *"any one or combination of the 7 layers"* as the Applicants have remarked. It is obvious to one of ordinary skill in the art that the method as rejected above according to Huang can be reapplied to a different common destination address to form a second group of encapsulated packets and compressed headers.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on 571/272-6159. The fax phone numbers for the organization where this application or proceeding is assigned are 703/872-9306 for regular communications and 703/872-9306 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571/272-2100.

Thomas Duong (AU2145)

February 4, 2005

V. Martin Wallace
V. Martin Wallace
Supervisory Patent Examiner